AIRPROX REPORT No 2023232

Date: 02 Oct 2023 Time: 1200Z Position: 5345N 00246W Location: 4NM east of Warton

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB



THE PHENOM PILOT reports that they had been established on the final inbound track between the intermediate and final fix for RW28 RNP approach at Blackpool. ATC advised of a fast jet in the Warton circuit below them. This had been coordinated with Blackpool Approach. Whilst level at 2000ft the Phenom crew noticed on TCAS an aircraft 800ft below. A few seconds later they had a TCAS RA commanding them to descend, which the crew started to react to. The pilot monitoring visually acquired the aircraft, an Albatross in a hard banked climbing turn through their level then arcing back down and away. At this point the TCAS changed from a descent to a climb. The Phenom peaked at 2300ft and then regained the platform to continue an RNP in visual conditions. The crew spoke with Warton radar by landline after landing at Blackpool and the controller noted that the Albatross pilot had been advised of the Phenom overflight and the pilot confirmed they had it visual whilst still at circuit height [and] then noticed [it] rapidly climb on base leg for no apparent reason. Both Captain and FO of the Phenom had seen the Albatross climbing through their level (2000ft) in what had been a high energy pull up and subsequent hard bank to the left of their aircraft, less than 1000m away, followed by a descent back towards Warton.

The pilot assessed the risk of collision as 'High'.

THE ALBATROSS OPERATOR reports that they confirmed that they had been flying on the said date. The coordinates for the [reported Airprox] confirmed that the event was on the edge of the Warton circuit. Neither crew member had any recollection of any nature of hearing or seeing another aircraft in close proximity, neither did they recall anything showing on the TCAS which would [have been] switched on and serviceable. Moreover, they note that they would have been obtaining a Traffic Service [they recall] from Warton control and neither of the crew had been aware of any call from them. Finally, [the crew reported that] they record no videos or GPS tracks on any sortie. Unfortunately therefore they

¹ Groundspeed derived from radar.

were unable to provide any information of any nature regarding [the UKAB] email. They offered their apologies that they could not have been of any further assistance.

THE BLACKPOOL APPROACH CONTROLLER (ATCO2) reports that at 1200 the Phenom pilot had called 'TCAS RA' whilst on the RNP approach for RW28 at Blackpool; the standard response of 'roger' had been given. The conflicting aircraft was believed to have been the Albatross in the left-hand circuit for RW25 at Warton. The Phenom pilot had then asked if Blackpool would prefer them to speak to Warton, at which point the Blackpool controller called Warton to ask if they wanted to speak to the Phenom pilot, to which they responded 'negative' and that they had been happy for the aircraft to continue the approach if the pilot had been happy to do so. The pilot had then been asked if they had been happy to continue the approach, to which the pilot responded 'affirmative'. The aircraft subsequently landed safely at 1204. A contact number had then been passed to the pilot to speak directly to Warton.

THE WARTON TOWER CONTROLLER reports that they had been the Tower controller with a trainee new to the Unit in their second week of training. In the circuit there had been an Albatross from Blackpool operated by a pilot familiar with Warton who, until the point of the reported TCAS RA/Airprox, had been flying visual circuits at 1000ft (circuit height). An aircraft had been observed on the ATM inbound to Blackpool and the opportunity taken to discuss its profile (RNP to RW28) with the trainee and that of other IFR movements using the BPL NDB. It had been mentioned that the Warton circuit may operate up to 1500ft and that any requirement for higher is to be negotiated with the Radar controller who will liaise with Blackpool. It had also been mentioned that the LOA between Warton and Blackpool states that the Warton visual circuit may operate up to 1500ft against traffic inbound to Blackpool unless a restriction has been requested by Blackpool (this is done through Warton Radar and had not been so on this occasion). During that discussion, the pilot of the Albatross had requested to position wide downwind for initials; this was negotiated with Radar who responded 'Just watch out for the [Phenom]' (the aircraft turning onto the final approach track to RW28 [the Phenom]). It had then been mentioned that the two aircraft would be in close proximity to each other and the trainee had been asked to pass Traffic Information. As this had been new to them, they had asked that the Tower controller did the broadcast and Traffic Information had been passed to the Albatross pilot of 'traffic northeast 1NM inbound to Blackpool 1000ft above'. During that broadcast, the Albatross had been seen to climb as the pilot called visual with the Blackpool traffic. The Mode C had been seen to climb from 1000ft to 1600ft before descending again to 1000ft for the initial point. The aircraft on final approach to RW28 had been at 2000ft and seen to climb to 2200ft. Sometime later, the Radar controller advised that the pilot of the Blackpool traffic had reported a TCAS RA; this had changed a day later (via notification by Manager ATS) to an Airprox. In follow-up conversation with the Radar controller, they had stated that the trainee had advised Blackpool that the Warton circuit had been active with jet traffic.

The controller perceived the severity of the incident as 'Low'.

Factual Background

The weather at Warton was recorded as follows:

METAR EGNO 021150Z 20005KT 9999 -RA FEW013 SCT018 14/12 Q1017=

Analysis and Investigation

Blackpool Safety Investigation

On the 2nd October 2023, ATCO1 was the Blackpool Approach controller providing a Procedural Service to the Phenom, at 1159 ATCO1 handed over to ATCO2. The Phenom was on the RNP approach to RW28 via TOVEL and reported the TCAS at time 1200.

ATCO1 notes that they had been the ADI APP controller when the Phenom came on frequency. Scottish Control had called on multiple occasions prior to them gaining control of the aircraft to change the estimate, routeing and release. Subsequently ATCO1 made multiple phone calls to Warton to advise them of these changes as per the LOA. Warton advised over the course of these

phone calls that they had the Albatross inbound but that it should be ahead and had been routeing towards high-key to do circuits. ATCO1 believed the concern had been because from the north this would put the Albatross through the outbound track of the procedure at a conflicting level. When the Phenom came on frequency the pilot had asked if Warton was active and requested the RNP. ATCO1 advised the Phenom pilot that it was clarified that they had wanted RNP not ILS and clarified the routeing to the IAF. ATCO1 passed the Warton warning as per procedures and the flight appeared to continue as normal. They advised Warton of the change in IAP as the aircraft crossed the BPL and Warton told them that the Albatross had been clear and they had nothing to affect. ATCO1 passed generic Traffic Information on the Warton circuit to the Phenom pilot. Warton had not specifically told ATCO1 that the circuit had been a factor and had not entered any coordination regarding it, however ATCO1 felt it best to warn the Phenom pilot so that they would not be surprised to see a fast jet in the vicinity.

At 1200 the pilot of the Phenom reported 'TCAS RA' to ATCO2 whilst on the RNP approach for runway 28. The conflicting aircraft was believed to be the Albatross in the left hand circuit runway 25 at Warton. The Phenom pilot asked if they should speak to Warton, ATCO2 liaised with Warton & agreed the aircraft could continue the approach on the Blackpool frequency. The aircraft subsequently landed at 1204.

Observations:

Non-standard multiple calls from Prestwick Centre (PC) changing the estimate, routeing and release. Estimate came originally T42, updated at T47 to new estimate of T50.

Pre-note for the level allocated at the BPL and co-ordination with Warton for the ILS approach 28 had been achieved by ATCO1 in good time. The Warton controller mentioned the Albatross joining the Warton circuit but said this had been well ahead.

Change to plan - the pilot of the Phenom on initial call requested the RNAV approach, the ATCO cleared for the RNP via the BPL then TOVEL and coordinated this with Warton – to which the reply from Warton Radar had been 'nothing to affect'.

ATCO1 passed Traffic Information on the Albatross in the Warton circuit to the pilot of the Phenom (NOTE: this had not been requested by Warton).

Handover then took place to ATCO2, the TCAS RA had been reported shortly after. No intervention had been needed by ATCO2; the Phenom pilot elected to continue the approach and reported visual with the other aircraft.

ATCO1 – Increased workload, last minute changes to estimate, routeing and plan (type of approach requiring extra co-ordination). Procedural Service was not allocated by the ATCO, initial time on frequency not noted on FPS, no other issues to note. Majority of phraseology standard and concise. Traffic Information passed on the Warton circuit although not requested by Warton.

ATCO2 – TCAS responded to correctly, no issues to note, phraseology standard.

Warton Radar – the ATCO said that there had been nothing to affect the RNP approach but then mentioned the Albatross had been well ahead, possibly leading to some ambiguity for ATCO1.

Warton LOA states the following that needs to be reviewed and may possibly be an historical entry:

A.2.1.2 In order to ensure operations at Warton may continue with limited disruption, the Warton visual circuit may operate up to height 1500ft against all traffic making approaches to RW 28 at Blackpool unless a restriction to operate not above 1000ft has been requested by Blackpool Tower/Approach.]

Blackpool, being procedural, would not be able to see when it is applicable to apply the circuit restriction – suggest this restriction could be set by Warton Radar when appropriate.

WARTON INCIDENT INVESTIGATION

On the 2nd October 2023, a Phenom had been making an RNP approach to RW28 at Blackpool when it responded to a TCAS RA against an aircraft (the Albatross) in the visual circuit at Warton; the pilot later reported an Airprox.

The Tower controller had been rostered as the early Tower controller on Monday 2nd October 2023; they had with them a trainee in the early stages of training. At the time of the Airprox the Tower controller had one aircraft in the visual circuit, an Albatross jet from Blackpool; it had been flown by a pilot familiar with Warton who used Warton regularly for training in a variety of aircraft types.

The Radar controller had been rostered as a late day shift on Monday 2nd October 2023; they had with them a trainee who was being observed as part of their return to currency. At the time of the Airprox, the Radar controller had been operating in light traffic conditions. They had been aware that the aircraft inbound to Blackpool had responded to a TCAS RA against an aircraft in the Warton visual circuit as they had received a telephone call from Blackpool ATC advising them of such. However, it had not been until 2 days later when advised by Manager ATS that they (and the Tower controller) had been informed that an Airprox had been filed.

In conducting this investigation, the reporter had listened to the Warton Tower and Radar RT and landline recordings, reviewed the DASOR filed by the Tower controller and spoken to both controllers. They had limited this investigation to the ATC aspects of the incident.

INVESTIGATION & ANALYSIS

In the time preceding the reported Airprox, the Radar controller stated that they had been informed by Blackpool Approach of an IFR aircraft (the Phenom) inbound to Blackpool for an RNP Approach via TOVEL. Blackpool had been advised that the Warton visual circuit had been active with jet traffic but it had not been determined if this information had been passed onward to the pilot of the Phenom. During this time, the Albatross had been in the circuit for some time and the pilot had requested to route to the Initial Point for RW25 for a run-and-break; this had been approved by the Tower controller who informed Radar. The Radar controller responded, "Just keep an eye on the [the Phenom], going for the RNP".

The Tower controller stated that they had been discussing the profile of the RNP approach with the trainee (as well as other IFR profiles to Blackpool and where the likely confliction points are) when the Albatross pilot had made their request to route to initials. Having made the call to Radar, the instructor had advised the trainee to pass Traffic Information on the Blackpool aircraft; however, as they had been unfamiliar they asked the instructor to make the broadcast, which they had. The Tower controller stated that as they had been passing Traffic Information they had observed from the Air Traffic Monitor (ATM) that the Mode C of the Albatross had shown the aircraft climb 5-600ft as the pilot had made the turn to initials whilst stating that they had been visual with the Blackpool aircraft [the Phenom].

The Radar controller stated that they had received a call from Blackpool Approach informing them that the pilot of the Phenom had responded to a TCAS RA and wanted to speak to Warton on the RT. The Warton Radar controller stated that they would speak to them once they had been on the ground. During that landline conversation, the Phenom pilot had said that they had received a TCAS RA and observed the Albatross at the same level. The Warton Radar controller had advised that the Mode C displayed to them had shown the Albatross briefly reaching 1600ft prior to descending again, the Mode C of the Phenom indicated 2000ft at that time.

Two days after the reported TCAS RA, the Manager ATS had informed both controllers that the pilot had filed an Airprox.

The Warton-Blackpool Letter of Agreement (LOA) states the following at para A.2.1.1:

In order to ensure operations at Warton may continue with limited disruption, the Warton visual circuit may operate up to height 1500ft against all traffic making approaches to RW28 at Blackpool unless a restriction to operate not above 1000ft has been requested by Blackpool Tower/Approach.

The Warton MATS Part 2 states at para 3.2.2.1 the following:

When Blackpool has inbound IFR traffic to RW28, they may require the Warton visual circuit height to be restricted to 1000ft. The Warton Approach Radar controller will make this request to the Tower controller who should impose a circuit height restriction of not above 1000ft until the Blackpool traffic is visual to him and clear to the north of Warton, or until the restriction is lifted by the Radar controller.

At para 2.1.5 the Warton MATS Part 2 states that '...the initial point is 3NM on the final approach at 1000ft on the extended centreline^{*}.

In analysing the voice recordings, it is evident that both Warton controllers complied with the instructions contained in the MATS Part 2 and the LOA. The Tower controller had noted some surprise that the pilot of the Albatross climbed as they had made the turn towards initials and observed that Traffic Information could have been passed slightly earlier but had been delayed due to the trainee being unfamiliar. They stated that they had observed on the ATM some 4-500ft separation between the two aircraft that had been seen to increase further when the Albatross pilot had descended back to 1000ft and the Phenom pilot had climbed to 2200ft. The pilot of the Albatross had reported visual with the Phenom on receipt of Traffic Information and subsequent circuits continued as normal.

OCCURRENCE CAUSE FACTORS

The initial view is that the pilot of the Albatross operating VFR climbed into apparent confliction with the Phenom operating IFR resulting in a TCAS RA and its pilot considering this event to have been an Airprox.

CONTRIBUTORY FACTORS

Controllers at both units are fully aware of the implications of aircraft making approaches to RW28 at Blackpool and the proximity to Warton's runway and visual circuit. There have been a number of mis-identifications of the Warton runway with aircraft making inadvertent approaches and so controllers make use of the ATM to aid identification and to spot errors. The LOA allows Blackpool to restrict the Warton circuit to 1000ft yet that option is rarely used; on this occasion that probably would have prevented the two aircraft coming into such proximity.

As the pilot of the Albatross is hugely experienced in the operation of jet aircraft (and multiple other types), there was an assumption that they would fly the circuits as expected i.e. at 1000ft unless cleared otherwise.

Warton has operated without trainees for a number of years and on the day in question found itself with trainees in both control positions. Whilst the reporter does not believe that this had made any material difference to the situation, they agree with the Tower controller's honest view that Traffic Information to the Albatross had been passed slightly later than desirable.

OBSERVATIONS

As the Warton controllers had only been notified of the Airprox two days after the incident, their recollection of the incident may not be as accurate as it could have been.

RECOMMENDATIONS

The following are offered as recommendations:

The Warton Manager ATS liaises with their counterpart at Blackpool with respect to reviewing the Warton-Blackpool LOA for relevance with respect to any restrictions placed on the Warton visual circuit.

Warton Tower controllers are briefed on the detail of the occurrence and the requirement to pass relevant and, importantly, timely traffic information.

CAA ATSI

ATSI conducted a review of the pilot and controller reports, the radar and Blackpool RTF. They note that the Blackpool investigation report covers events from their side and the Warton report seems to be in a similar vein. ATSI queried the point that Blackpool had raised in their investigation report relating to the LoA with Warton:

Warton LOA states the following that needs review, possibly a historical entry. Blackpool being procedural would not be able to see when it is applicable to apply the circuit restriction – suggest this restriction could be set by Warton Radar when appropriate.

A.2.1.2	In order to ensure operations at Warton may continue with limited disruption, the Warton visual circuit may operate up to height 1500ft against all traffic making approaches to RW 28 at Blackpool unless a restriction to operate not above 1000ft has been requested by
	Blackpool Tower/Approach.

ATSI notes that there had been a recent change of ATC management at Blackpool and they have been advised that they have not used the height restriction in recent memory and the LoA is itself under review.

The incident seems to have occurred when the pilot of the Albatross, who had been previously flying circuits at or below 1000ft at Warton, elected to move off final approach and climb into proximity with the Phenom. Blackpool has no surveillance capability and so would not have been aware of the developing situation. Warton, on the other hand, does and warnings were issued by the radar controller to the trainee Tower controller and mentor, the latter passing Traffic Information to the pilot of the Albatross on the Phenom. The pilot of the Albatross had reported being visual with the Phenom.

UKAB Secretariat



CPA 1159:56 400ft V/0.7NM H

The Phenom and Albatross pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard.² If the incident geometry is considered as converging then the Albatross pilot was required to give way to the Phenom.³ An aircraft operated on or in the vicinity of an aerodrome shall conform with or avoid the pattern of traffic formed by other aircraft in operation.⁴

Summary

An Airprox was reported when a Phenom and an Albatross flew into proximity 4NM east of Warton at 1200Z on Monday 2nd October 2023. The Phenom pilot was operating under IFR in VMC and the Albatross pilot operating under VFR in VMC, the Phenom pilot in receipt of a Procedural Service from Blackpool and the Albatross pilot in receipt of an ACS from Warton.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, radar photographs/video recordings, reports from the air traffic controllers involved and reports from the appropriate operating authorities. Relevant contributory factors mentioned during the Board's discussions are highlighted within the text in bold, with the numbers referring to the Contributory Factors table displayed in Part C.

The Board firstly discussed the actions of the Phenom pilot. They noted that they had been positioning for an RNP approach to RW28 at Blackpool and had been in receipt of a Procedural Service. As they had levelled at 2000ft, they had received a TCAS RA (**CF5**) with descend and then visually acquired the Albatross in a climbing banked turn to their left, with their TCAS RA switching from descend to climb. Members felt that the Phenom pilot had been following procedure and could have done little more.

Turning to the actions of the Albatross pilot, members discussed the report submitted by the pilot and stressed the need to capture as much detail of such events as is possible – noting that the standard UKAB reporting form helps pilots to recall information relevant to each event. In looking at the moments leading to the CPA, the Board noted that the Albatross pilot's request to position wide downwind for initials had been approved with Traffic Information regarding the Phenom having been passed by the Warton controller. Members opined that the Albatross's higher speed and manoeuvrability, which the Phenom pilot would possibly not be used to, had likely led to the Albatross pilot peaking above the 1500ft limit imposed through the LoA (CF2, CF3) and triggering the Phenom's TCAS RA with the Albatross pilot not having assimilated the potential for conflict (CF4). Board members noted the carriage of a TCAS unit by the Albatross and had questioned why that had not registered emissions from the Phenom (CF6).

In considering the actions of the controllers involved, the Board felt that coordination had been in place and that Traffic Information regarding the Albatross' approach to the Warton circuit had been passed but that it would have been clear of the Phenom's path. The Blackpool controller had alerted the Phenom pilot to the Albatross in the Warton circuit. As the Warton Tower controller had been with a trainee, they had discussed the LoA-agreed height limit in the circuit and the need to seek adjustments to it via the Radar controller who would liaise with Blackpool. Equally, should Blackpool require height limitations to be set in the Warton circuit to protect inbound traffic to Blackpool, they should request such from Warton and, as they had understood that the Albatross had been remaining at 1000ft, they had not requested that change. Members felt that the LoA-agreed methodology for requests to altitude limits was not reasonable in this case and were heartened to hear that such a review of the LoA is already in train (**CF1**).

When determining the risk of the Airprox, the Board considered the reports from both pilots together with that of the controllers involved. They noted that the Phenom pilot had been in receipt of a service, operating in accordance with normal procedures and utilising electronic conspicuity equipment to further

² (UK) SERA.3205 Proximity.

³ (UK) SERA.3210 Right-of-way (c)(2) Converging.

⁴ (UK) SERA.3225 Operation on and in the Vicinity of an Aerodrome.

their own and others' situational awareness but, ultimately, the Albatross pilot had flown close enough to the Phenom to cause the pilot to be concerned by its proximity (**CF7**, **CF8**). However, members agreed that although safety had been degraded, there had been no risk of collision; Risk Category C.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2023232										
CF	Factor	Description	ECCAIRS Amplification	UKAB Amplification							
	Ground Elements										
	Regulations, Processes, Procedures and Compliance										
1	Organisational	 Aeronautical Information Services 	An event involving the provision of Aeronautical Information	The Ground entity's regulations or procedures were inadequate							
	Flight Elements										
	Regulations, Pro	cesses, Procedures and Co	mpliance								
2	Human Factors	• Use of policy/Procedures	Events involving the use of the relevant policy or procedures by flight crew	Regulations and/or procedures not complied with							
	Tactical Planning	g and Execution									
3	Human Factors	 Action Performed Incorrectly 	Events involving flight crew performing the selected action incorrectly	Incorrect or ineffective execution							
	Situational Awareness of the Conflicting Aircraft and Action										
4	Human Factors	Understanding/ Comprehension	Events involving flight crew that did not understand or comprehend a situation or instruction	Pilot did not assimilate conflict information							
	Electronic Warn	ing System Operation and	Compliance								
5	Contextual	• ACAS/TCAS RA	An event involving a genuine airborne collision avoidance system/traffic alert and collision avoidance system resolution advisory warning triggered								
6	Human Factors	 Response to Warning System 	An event involving the incorrect response of flight crew following the operation of an aircraft warning system	CWS misinterpreted, not optimally actioned or CWS alert expected but none reported							
	See and Avoid										
7	Human Factors	 Lack of Individual Risk Perception 	Events involving flight crew not fully appreciating the risk of a particular course of action	Pilot flew close enough to cause concern							
8	Human Factors	Perception of Visual Information	Events involving flight crew incorrectly perceiving a situation visually and then taking the wrong course of action or path of movement	Pilot was concerned by the proximity of the other aircraft							

Degree of Risk:

C.

Safety Barrier Assessment⁵

In assessing the effectiveness of the safety barriers associated with this incident, the Board concluded that the key factors had been that:

Ground Elements:

Regulations, Processes, Procedures and Compliance were assessed as **partially effective** because the LoA between Blackpool and Warton would potentially benefit from a review to ensure ongoing clarity for both operators.

⁵ The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the <u>UKAB Website</u>.

Flight Elements:

Regulations, Processes, Procedures and Compliance were assessed as **partially effective** because the Albatross pilot exceeded the LoA height limit in the Warton circuit.

Tactical Planning and Execution was assessed as **partially effective** because the Albatross pilot exceeded the height limit in the Warton circuit.

Situational Awareness of the Conflicting Aircraft and Action were assessed as partially effective because the Albatross pilot had not assimilated the conflict information passed with respect to the Phenom.

	Airprox Barrier Assessment: 2023232 Outside Controlled Airspace						
	Barrier	Provision	Application %0	5%	Effectiveness Barrier Weighting 10%	g 15%	20%
Ground Element	Regulations, Processes, Procedures and Compliance				8	÷	
	Manning & Equipment						
	Situational Awareness of the Confliction & Action	\bigcirc					
	Electronic Warning System Operation and Compliance						
Flight Element	Regulations, Processes, Procedures and Compliance	\bigcirc					
	Tactical Planning and Execution						
	Situational Awareness of the Conflicting Aircraft & Action	\bigcirc					
	Electronic Warning System Operation and Compliance						
	See & Avoid						
	Key: Full Partial None Not Press Provision Image: Comparison of the second	ent/Not Asse	essable	Not Used			